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| 10/810,468      | 03/25/2004  | Tadashi Matsuoka     | 16869N-024111US     | 9802             |

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EXAMINER

KALIVODA, CHRISTOPHER M

ART UNIT PAPER NUMBER

2883

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/810,468

Applicant(s)

MATSUOKA ET AL.

Examiner

Christopher M. Kalivoda

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-15 is/are rejected.
- 7) ☒ Claim(s) 10 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: The disclosure is missing the section "Cross-Reference to Related Applications" before the Background section. Appropriate correction is required.

### ***Claim Objections***

2. Claims 10 and 14 are objected to because of the following informalities: Both of these claims reference a "third dispersion compensator" in line 2. However, there is no reference to a "second dispersion compensator" in the claims upon which they depend. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dutta et al. U.S. Patent 6,748,150 in view of Dugan, U.S. Patent 5,224,183. Regarding independent claim 8, Dutta et al. teach an optical transmission unit executing light signal dispersion compensation (col 1, lines 42-49) comprising:

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An optical branching filter (col 2, lines 47-49 and Fig 1, ref sign 110) which receives a first wavelength-multiplexed light signal (col 2, line 25) and splits it into at least a first light signal (col 2, line 49) and a second wavelength-multiplexed light signal (see Fig 1 at ref sign 110). The first signal goes down to amplifier 120 and the second-WDM signal goes across to the coupler, Fig 1, ref sign 180);

An optical coupler (see Fig 1, ref sign 180) configured to receive at least the second wavelength multiplexed light signal and a second light signal (col 3, lines 27-31) and couple the second wavelength-multiplexed light signal and the second light signal to thereby output a third wavelength-multiplexed light signal (col 3, lines 31-32).

However, the reference is silent with respect to a first dispersion compensator coupled to receive the second wavelength-multiplexed light signal and provide dispersion compensation.

Dugan teaches a first dispersion compensator coupled to receive the second wavelength-multiplexed light signal and provide dispersion compensation (Fig 2, ref sign 26).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Dutta et al. and insert a first dispersion compensator coupled to receive the second wavelength-multiplexed light signal and provide dispersion compensation for the purpose of improving transmission performance where dispersion is a problem (col 1, lines 32-35). In other words, the dispersion compensator would be placed on the line between the two devices (Fig 1, ref

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sign 110 and 180 of Dutta et al.). Please note that Dutta et al. indicates there is dispersion in the express channels (col 4, lines 8-14).

Regarding claim 9, there is a second dispersion compensator coupled to compensate for dispersion of the second light signal (Fig 1, ref sign 170).

Regarding claim 10, there is a third dispersion compensator coupled to compensate for dispersion of the first wavelength-multiplexed light signal (Fig 1, ref sign 130).

Regarding claim 11, there is an amplifier coupled to amplify the second wavelength-multiplexed light signal from the dispersion compensator (Fig 1, ref sign 160).

5. Regarding independent claim 12, Dutta et al. teach an optical transmission unit executing light signal dispersion compensation (col 1, lines 42-49) comprising:

An optical branching filter (col 2, lines 47-49 and Fig 1, ref sign 110), which receives a first wavelength-multiplexed light signal (col 2, line 25) and in response outputs a second wavelength-division multiplexed light signal (col 2, line 49) and a third wavelength-multiplexed light signal (see Fig 1 at ref sign 110). The second wavelength-multiplexed light signal goes down to amplifier 120 and the third wavelength-multiplexed signal goes across to the coupler, Fig 1, ref sign 180);

An optical coupler (see Fig 1, ref sign 180) configured to receive the third wavelength-multiplexed light signal and receive a fourth wavelength-multiplexed light

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signal (col 3, lines 27-31) and in response output a fifth wavelength-multiplexed light signal (col 3, lines 31-32).

However, the reference is silent with respect to a first dispersion compensator coupled to compensate for dispersion of the third wavelength-multiplexed light signal.

Dugan teaches a first dispersion compensator coupled to receive the second wavelength-multiplexed light signal and provide dispersion compensation (Fig 2, ref sign 26).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Dutta et al. and insert a first dispersion compensator coupled to receive the third wavelength-multiplexed light signal and provide dispersion compensation for the purpose of improving transmission performance where dispersion is a problem (col 1, lines 32-35). In other words, the dispersion compensator would be placed on the line between the two devices (Fig 1, ref sign 110 and 180 of Dutta et al.). Please note that Dutta et al. indicates there is dispersion in the express channels (col 4, lines 8-14).

Regarding claim 13, there is a second dispersion compensator coupled to compensate for dispersion of the second light signal (Fig 1, ref sign 170).

Regarding claim 14, there is a third dispersion compensator coupled to compensate for dispersion of the first wavelength-multiplexed light signal (Fig 1, ref sign 130).

Regarding claim 15, there is an amplifier coupled to amplify the second wavelength-multiplexed light signal from the dispersion compensator (Fig 1, ref

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sign 160).

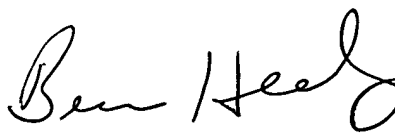
**Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (571) 272-2476. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Brian Healy  
Primary Examiner